

Claims

1. Device for the implantation of occlusion helixes (3) that can be separated by electrolysis in blood vessels and body cavities, especially aneurysms (12), said device comprising an insertion aid (4), at least one occlusion helix (3) that is distally arranged in relation to the insertion aid (4) and at least one electrolytically corrodible severance element (2), with at least one stabilization helix (5) being arranged between severance element (2) and occlusion helix (3),  
5      characterized in that  
10      said stabilization helix (5) being connected with the occlusion helix (3) by an electrically isolating adhesion layer (7) such that the occlusion helix (3) becomes isolated from the voltage when an electrical voltage is applied to the severance element (2).
- 15      2. The device according to claim 1, characterized in that the stabilization helix (5) is provided with an electrically isolating coating (11).
3.      The device according to claims 1 or 2, characterized in that a securing means (6) extends through the lumen of the occlusion helix (3).
- 20      4. The device according to claim 3, characterized in that the securing means (6) consists of a material having shape-memory properties.
5.      The device according to claim 4, characterized in that the securing means (6) undergoes transformation and assumes a previously impressed structure when placed into the blood vessel or body cavity.

6. The device according to claims 4 or 5, characterized in that the securing means (6) consists of Nitinol.

7. Device according to any one of the claims 3 to 6, characterized in that at least one securing means (6) extends from the stabilization helix (5) to 5 the distal front section (8) of the occlusion helix (3).

8. Device according to claim 7, characterized in that said at least one securing means (6) is connected with the distal front section (8) of the occlusion helix (3) via an adhesion layer (9) which serves to isolate the occlusion helix (3) from an electrical voltage applied to the severance element (2).

10 9. The device according to any one of claims 3 to 8, characterized in that the securing means (6) is provided with an electrically isolating coating.

10. The device according to any one of claims 3 to 9, characterized in that the occlusion helix (3) is provided at least on its inner side with an electrically isolating coating.

15 11. The device according to any one of claims 1 to 10, characterized in that the occlusion helix (3) is provided with several spaced electrolytically corrodible severance elements (2).

12. The device according to any one of claims 1 to 10, characterized by several spaced occlusion helices (3), with one electrolytically corrodible severance element (2) each being arranged between the individual occlusion helices (3). 20

13. The device according to claims 11 or 12, characterized in that one securing means (6) each is arranged in the segments of the occlusion helix (3) located between the severance elements (2) or in the individual occlusion helices (3). 25

14. The device according to claim 13, characterized in that at least some of the securing means (6) in each case extend from one stabilization helix (5) connected by a severance element (2) to the next distally located stabilization helix (5).

5 15. The device according to claim 13, characterized in that at least some of the securing means (6) extend from one severance element (2) to the next distally located severance element (2).

10 16. The device according to any one of claims 11 to 15, characterized in that the severance elements (2) are connected with each other so as to be electrically conductive via the securing means (6) extending through the lumen of the occlusion helixes (3).

17. The device according to any one of claims 1 to 16, characterized in that the adhesion layers (7, 9) and/or the electrically isolating coatings (11) consist of an acrylate adhesive.

15 18. The device according to claim 17, characterized in that the acrylate adhesive is Permabond.

19. The device according to any one of the claims 1 to 18, characterized in that the severance elements (2) are made of a steel alloy material.

20 20. The device according to any one of the claims 1 to 19, characterized in that the severance elements (2) are pre-corroded.

21. The device according any one of claims 1 to 20, characterized in that the occlusion helixes (3) are made of platinum or a platinum alloy, in particular a platinum-iridium alloy.

25 22. The device according to any one of the claims 1 to 21, characterized in that the insertion aid is a guide wire (4).

23. The device according to any one of the claims 1 to 22, characterized in that said device is provided in the form of a micro-catheter (1).

24. Medical implant according to any one of the aforesaid claims consisting of at least one occlusion helix (3), at least one severance element (2) and  
5 at least one stabilization helix (5), with the stabilization helix (5) being arranged between severance element (2) and occlusion helix (3), and the stabilization helix (5) being attached to the occlusion helix (3) via an electrically isolating adhesion layer (7).

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